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MASSACHUSETTS HOUSING REPORT

Executive Office of Communities and Development
Michael S. Dukakis, Governor Amy S. Anthony, Secretary

March 1988

Dear Reader:

I am pleased to introduce the first issue of the "Massachusetts Housing Report," a new publication of EOCD. This and future editions will present statistics and analyses of trends in the state's housing market.

It is my hope that a concise collection of relevant housing and economic data will help those in both the public and private sectors to be better informed about our ever-changing housing situation.

Sincerely,

Amy S. Anthony
Secretary

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REPORT HIGHLIGHTS

- A significant increase in household-forming and first-time homebuyer age groups created a surge in demand for housing across the state, fueling the escalation in house prices experienced during the 1980s.
- Increases in housing supply lagged behind demand, especially during the early part of the decade, further contributing the rapid rise in house prices.
- The production of new housing has greatly increased since 1982.
- Population growth in the household-forming age group will peak by the end of the decade and decline in the early-1990s, lessening the demand for housing from this group.
- Real income of households has grown in this decade. The state's favorable job growth forecast, and low expected population growth into the 1990's, suggests that income for households with working members will continue to increase.

If existing trends continue -- a high level of housing production, increased growth in household income, and a decline in the household-forming population -- then Massachusetts should see an easing of the housing affordability problem.

It is well known that housing prices throughout Massachusetts have risen sharply during the 1980's. The Boston metropolitan area has witnessed an extreme increase in the cost of single-family homes. The average price doubled during the four-year period between 1982 and 1986, from \$80,200 to \$159,200. Moreover, year-end data for 1987 show an average price of about \$176,500 -- or an additional 11% over 1986.

To a large extent, the price escalations are due to fundamental supply and demand issues: Massachusetts has had more households than the supply has been able to satisfy. The state's overall population has increased during the current decade. But more significantly, there has been a bulge in the age groups where much new household formation, and therefore demand for housing, occurs.

Demographic Changes

During the 1980's, the annual rate of population growth in Massachusetts has been triple that of the 1970's. Between 1980 and 1986, the state gained close to 16,000 new residents per year. This net increase compares to an annual average growth of only 5,000 during the 1970's. (See Table 1, below.)

Table 1. **Population Growth in Massachusetts
1970, 1980 and 1986**

	<u>Population</u>	<u>Change from the Preceding Period</u>		
		<u>Total Amount</u>	<u>Percent</u>	<u>Annual Average Amount</u>
1970	5,689,170			
1980	5,737,093	47,923	0.8	4,800
1986 (est)	5,832,000	94,907	1.7	15,800

Source: U.S. Dept. of Commerce, Bureau of the Census, 1970 and 1980 Census of Population, and 1986 Population Estimates (from Mass. State Data Center).

Population in the household-forming and first-time homebuyer (and "trade-up") age groups has grown even more rapidly. Growth in the 20 to 34 year-old group -- those likely to be forming households and looking for places to live -- increased by 7% between 1980 and 1985, or nearly 100,000 persons. Similarly, the population of the 25 to 39 year-old group -- those likely to be looking for their first or perhaps larger homes -- expanded by 15%, or almost 200,000 persons. (See Appendix Table A-1.) Consistent with these demographic changes has been an increase in the number of households that have actually formed. Between 1980 and 1986, there were 140,000 new households in Massachusetts -- an increase of nearly 7%. (See Appendix Table A-2.)

Housing Production

In 1980, there were 2.2 million year-round housing units in the state, 57% of which were single-family homes. By 1985, the total housing stock had increased by 5.5%. (See Table 2, below.) When compared to the rate of household formation, and particularly the increase in the first-time homebuyer age group, housing supply lagged significantly behind projected demand during the first half of the decade.

Table 2. **Growth in Massachusetts' Housing Stock, 1980 - 1985**
(figures rounded to nearest hundred)

	<u>Single-Family</u>	<u>Multi-Family</u>	<u>Total</u>
1980 Year-Round Units	1,256,800	868,300	2,125,100
1980-85 Estimated Units Completed	82,500	45,000	127,500
1980-85 Demolition Permits, Units	2,700	7,500	10,200
Estimated 1985 Year-Round Units	1,336,600	905,800	2,242,400
1980-85 Net Change, Units	79,800	37,500	117,300
1980-85 % Change	6.3	4.3	5.5

1. Assumes that all single-family homes were intended for year-round occupancy, and buildings and demolitions resulted from permits issued.
2. Does not include units in non-residential buildings converted to housing, deduct housing units converted to non-residential uses, or the affect of accessory apartments.
3. Mobile homes are not included.

Source: U.S. Dept. of Commerce, Bureau of the Census, 1980 Census of Housing; U.S. Dept. of Commerce, Bureau of the Census, Construction Statistics Division; EOCD estimates.

During the more recent years, however, the rate of production has picked up. Evidence of growth in housing supply is seen in building permit activity across the state. The annual number of single- and multi-family building permits issued in 1986 was triple the number in 1980. Notable too is the decline in permits issued to demolish multi-family units: units covered by permits dropped from 2,416 in 1980 to only 325 in 1986. (See Appendix Table A-5.)

Housing Affordability

Despite real growth in household income in Massachusetts during the decade (and declines in mortgage interest rates following the sharp increases of the early-80's), fewer households could afford existing single-family homes in 1986 than in 1979. For example, in the Boston metropolitan area, nearly one-half of all households could afford the median-priced home in 1979. By 1986, the percentage had dropped to 30%. (See Table 3, below.)

Table 3. Existing Single-Family Home Affordability
Boston Metropolitan Area, 1979, 1984, 1986

	Median Priced Existing Single- Family Home	Mortgage Rate(2)	Mthly P&I(3)	Median Household Income	Qualifying Income(4)	% of All Households With Quali- fying Income
1979	\$ 56,000(1)	11.10	\$ 430	\$ 17,600	\$ 18,400	48%
1984	100,000	13.14	894	28,100	38,300	34%
1986	159,200	10.21	1,137	32,800	48,700	30%

(1) 1980 U.S. Census, median value of owner-occupied housing units, 4/80.

(2) Effective interest rate, including pre-paid interest.

(3) Assumes mortgage is 80% of sales price; 30-year, fully amortized.

(4) Assumes 28% of gross income allowable for debt service.

Source: National Association of Realtors, Home Sales; U.S. Bureau of the Census, Current Population Survey; Federal Home Loan Bank Board, Mortgage Interest Rate Survey. (The geographic areas covered by the sources vary, but this variation should not affect the results.)

There are recent indications that home prices are leveling off. Fourth quarter data on Boston area home prices show a 2% decline from the third quarter. This drop represents the first negative quarterly growth in recent years. (See Appendix Table A-6.)

Although Massachusetts continues to experience serious affordability issues, home sales have been strong. The 1987 average annual turnover rate for single-family homes, condominiums, and cooperative apartments of 100,000 units was well above the previous three years' annual averages. (See Appendix Table A-7.) In the second quarter of 1987, sales were estimated to have jumped to an unprecedented rate of 113,700 per year, a 31% increase over the first quarter. In both the third and fourth quarters of 1987, homes were turning over at an annual rate of about 100,000, or 12% less than the second quarter annualized rate.

These data reveal an apparent anomaly: fewer households have enough income to purchase the median priced home, yet sales volume is at a very high level. There are two explanations for this. First, the transaction figures include condos sales, many of which are made to investor-owners. Second, many sales are to households trading-up, and where these households have made large gains on the sale of their previous homes, they are able to make large downpayments on their new homes. Indeed, there has been a pattern of decreasing loan-to-value ratios -- and thus higher downpayments -- for conventional mortgages in Massachusetts in this decade. In 1986, conventional mortgages were two-thirds of the purchase price of existing single-family homes in the Boston metropolitan area. (See Table 4, below.)

**Table 4. Loan-to-Price Ratio For Purchase of Existing Single-Family Homes
Boston Metropolitan Area, Annual Averages**

1980	1981	1982	1983	1984	1985	1986
71.9	71.3	71.8	70.5	71.9	67.8	66.7

Source: Federal Home Loan Bank Board, Mortgage Interest Rate Survey.

Jobs, Labor Force, and Income

The Massachusetts economy is strong, and available indicators suggest that its strength will continue into the 1990's. The state has experienced steady job growth, very low unemployment rates, and real growth in household income in the 1980's, and job growth is projected to continue into the next decade. Continued prosperity will be a necessary part of the formula for easing housing affordability problems in the Commonwealth.

Employment in Massachusetts increased 14.8% between 1980 to 1987, exceeding the U.S. increase of 12.9%. The pattern of growth has essentially followed that of the nation, with a decline in the 1981-82 recession and steady growth since. (See Appendix Table A-3.)

Nevertheless, unemployment rates have been markedly low, with statewide rates below 4% for much of the past two years. (See Appendix Table A-4.)

An important explanation for the high employment rate is that the state's job growth has far exceeded the growth in the working age population. Between 1980 and 1985, jobs increased by 10% while the number of working age residents (aged 16 years and older), grew by only 4%. Consequently, the ratio of jobs to population increased from 61% in 1980 to 65% in 1985. This favorable situation is projected to continue into the next decade. In 1995, the ratio of jobs to working age population could be 70%. (See Table 5, below.)

Table 5. **Jobs and Potential Labor Force in Massachusetts**
1980-1985-1995
(in thousands)

	<u>Non-Agricultural Wage & Salary Employment</u>	<u>Working Age Population (16+)</u>	<u>Jobs Per Person</u>
1980	2,652.2	4,374.0	.61
% Change	+10.3	+3.6	
1985	2,926.0	4,532.0	.65
% Change	+12.8	+3.3	
1995	3,299.1	4,682.0	.70

Source: Employment: 1980 and 1985, U.S. Bureau of Labor Statistics, Current Employment Statistics; 1995, Mass. Division of Employment Security, Massachusetts Industrial Employment Projected Changes, 1984-1995, May 1986.

Working Age Population: 1980 and 1985, U.S. Bureau of Labor Statistics, Current Population Survey; 1995, estimated from Mass. Institute for Social and Economic Research, Provisional Population Projections, June 1986; not exactly comparable to 1980 and 1985 figures, with 15 year olds and institutional population estimated.

Wages and salary growth in the Northeast region -- an area which includes Massachusetts -- has exceeded the national rate of change in every year since 1982. The Bureau of Labor Statistics reports that wages and salaries for non-agricultural workers in the Northeast rose at 4.5% from September 1986 to September 1987, while increasing only 3.3% nationally. Real household income accordingly has grown during the decade. The rate of increase in the state's median household income exceeded the rate of growth in all Boston area consumer prices. The annual average rate of increase was 1.5% between 1979 and 1984, and increased to 2.1% between 1984 and 1986. (See Table 6, below.)

Table 6. **Annual Household Income, Massachusetts**
1979, 1984, 1986
Number and Percent Distribution

	1979		1984		1986	
	Households	%	Households	%	Households	%
Under \$10,000	586,430	29	351,447	17	361,767	17
10,000-19,999	572,851	28	413,633	20	374,037	17
20,000-34,999	570,159	28	562,575	27	520,997	24
35,000-59,999	266,173	13	512,412	24	602,835	28
60,000-74,999	31,308	2	133,547	6	155,801	7
\$75,000 +	12,889	1	125,763	6	171,801	8
Total	2,039,810	100	2,099,377	100	2,187,238	100
Median, Current \$	17,500		27,000		30,100	
Annual Rate of						
Change, Current \$		9.0%		5.6%		
Median, Constant						
1986 \$	26,800		28,900		30,100	
Annual Rate of						
Change, Constant \$		1.5%		2.1%		

Source: U.S. Dept of Commerce, Bureau of the Census, Current Population Survey, March 1980, 1985, and 1987; CPS weights; tabulated by Mass. State Data Center, December 1987.

Looking Ahead

Population projections suggest only modest overall growth for the state and declines in the number of persons in the household-forming age groups (20-34 years). This situation, in conjunction with the recent increases in housing production in Massachusetts, should lead to an easing of demand pressure. Further, the state's favorable economic outlook suggests high rates of employment, and consequently earned income. Continued household income growth would lay the foundation for income to catch up with house prices, and reduce the housing affordability gap.

Housing supply and affordability remain challenges in the near term. State housing policy is working on both issues, with a great variety of programs to increase housing production, and to subsidize rents and home purchase of low- and moderate-income households. A future issue of the Massachusetts Housing Report will discuss EOCD housing program activity.

Sara E. Wermiel
Research Coordinator

APPENDIX TABLES

Table A-1

Massachusetts Population of Household-Forming Age (20-34 years)
and First-Time Homebuying Age (25-39 years)
1980 Actual, 1985 - 1990 Projections

		Household-Forming Population, Aged 20 - 34 Years	
		Change from Preceding Period	
		Number	Percent
1980	1,488,500		
1985	1,586,300	97,800	6.6
1990	1,562,300	(24,000)	-1.5
1995	1,395,000	(167,300)	-10.7

		First-Time Homebuying Population, Aged 25 - 39 Years	
		Change from Preceding Period	
		Number	Percent
1980	1,284,100		
1985	1,475,200	191,100	14.9
1990	1,566,900	91,700	6.2
1995	1,542,700	(24,200)	-1.5

Note: Figures rounded to nearest 100.

Source: 1980: U.S. Dept. of Commerce, Bureau of the Census.

1985-1995: Mass. Institute for Social and Economic Research,
"Provisional Population Projections, 1985, 1990, 1995, for Cities
and Towns in Massachusetts," June 1986.

Table A-2

Households, Massachusetts and the U.S., 1980 -1986
(in thousands)

		Massachusetts		United States	
		Change		Change	
	Households	Amount	Percent	Households	Amount Percent
1980	2,033			80,390	
1981	2,074	41	2.0	82,620	2,230 2.8
1982	2,078	4	0.2	83,540	920 1.1
1983	2,087	9	0.4	84,336	796 1.0
1984	2,126	39	1.9	86,019	1,683 2.0
1985	2,155	29	1.4	87,489	1,470 1.7
1986	2,173	18	0.8	88,797	1,308 1.5
1980-1986		140	6.9		8,407 10.5

Source: U.S. Dept. of Commerce, Bureau of the Census, State
Population and Household Estimates, with Age, Sex, and Components of
Change: 1981-1986, September 1987; 1980 figures for April, all
others are for July.

Table A-3

Massachusetts and U.S. Non-Agricultural Wage and Salary Employment
1980 - 1987, Annual Averages
(in thousands)

	Massachusetts		United States	
	Amount	Percent Change	Amount	Percent Change
1980	2,652.2		90,406	
1981	2,668.3	0.6	91,156	0.8
1982	2,638.0	-1.1	89,566	-1.7
1983	2,692.5	2.1	90,200	0.7
1984	2,851.8	5.9	94,496	4.8
1985	2,926.0	2.6	97,519	3.2
1986	2,984.8	2.0	99,610	2.1
1987	3,045.8	2.0	102,105	2.5
Net Change 80-87	393.6	14.8	11,699	12.9

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Current Employment Series, and Mass. Division of Employment Security, Employment Review (86 & 87 figures based on March 1987 benchmark).

Table A-4

Unemployment Rates, Massachusetts, Boston Metro Area, and
the United States, 1986 - 1987

	Massachusetts		Boston Metro*		United States		Ratio MA/US
	1987	1986	1987	1986	1987	1986	Unemploymnt Rates, 1987
JAN	3.5	3.4	3.3	3.3	6.7	6.8	0.52
FEB	3.5	3.8	3.1	3.5	6.7	7.2	0.52
MAR	3.9	3.8	3.6	3.5	6.6	7.2	0.59
APR	4.0	4.0	3.3	3.3	6.3	7.1	0.63
MAY	3.7	4.4	2.9	3.5	6.3	7.2	0.59
JUNE	3.2	3.7	2.7	3.3	6.1	7.1	0.52
JULY	2.5	3.8	2.2	3.3	6.0	7.0	0.42
AUG	3.0	3.9	2.5	3.3	6.0	6.8	0.50
SEPT	2.5	4.0	2.5	3.8	5.9	7.0	0.42
OCT	3.2	3.9	2.3	2.9	6.0	6.9	0.53
NOV	2.7	4.0	2.0	3.1	5.9	6.9	0.46
DEC	2.9	3.3	2.3	2.6	5.8	6.7	0.50
ANNUAL							
AVG.	3.2	3.8	2.7	3.3	6.2	7.0	0.52

*Not seasonally adjusted.

Source: Mass. Division of Employment Security, Monthly Labor Force and Unemployment Data, for the U.S. Bureau of Labor Statistics.

Table A-5

Building Permits in Massachusetts, 1980-1986
Annual Averages, in Units

	<u>Single-Family</u>			<u>Percent Net Year to Year Increase</u>
	<u>Construction</u>	<u>Demolition</u>	<u>Net</u>	
1980	10,520	459	10,061	
1981	10,273	505	9,768	(2.9)
1982	9,855	378	9,477	(3.0)
1983	16,692	404	16,288	71.9
1984	21,184	426	20,758	27.4
1985	25,594	503	25,091	20.9
1986	28,110	646	27,464	9.5
Total 1980-86	122,228	3,321	118,907	

	<u>Multi-Family</u>			<u>Percent Net Year to Year Increase</u>
	<u>Construction</u>	<u>Demolition</u>	<u>Net</u>	
1980	5,972	2,416	3,556	
1981	6,409	1,959	4,450	25.1
1982	5,584	1,453	4,131	(7.2)
1983	6,148	720	5,428	31.4
1984	8,104	422	7,682	41.5
1985	13,602	480	13,122	70.8
1986	17,105	325	16,780	27.9
Total 1980-86	62,924	7,775	55,149	

Note: For private construction only.

Source: U.S. Dept. of Commerce, Bureau of the Census, Construction Statistics Division, State/County Permit Authorized Construction in Permit Issuing Places, Annual 1980-1986.

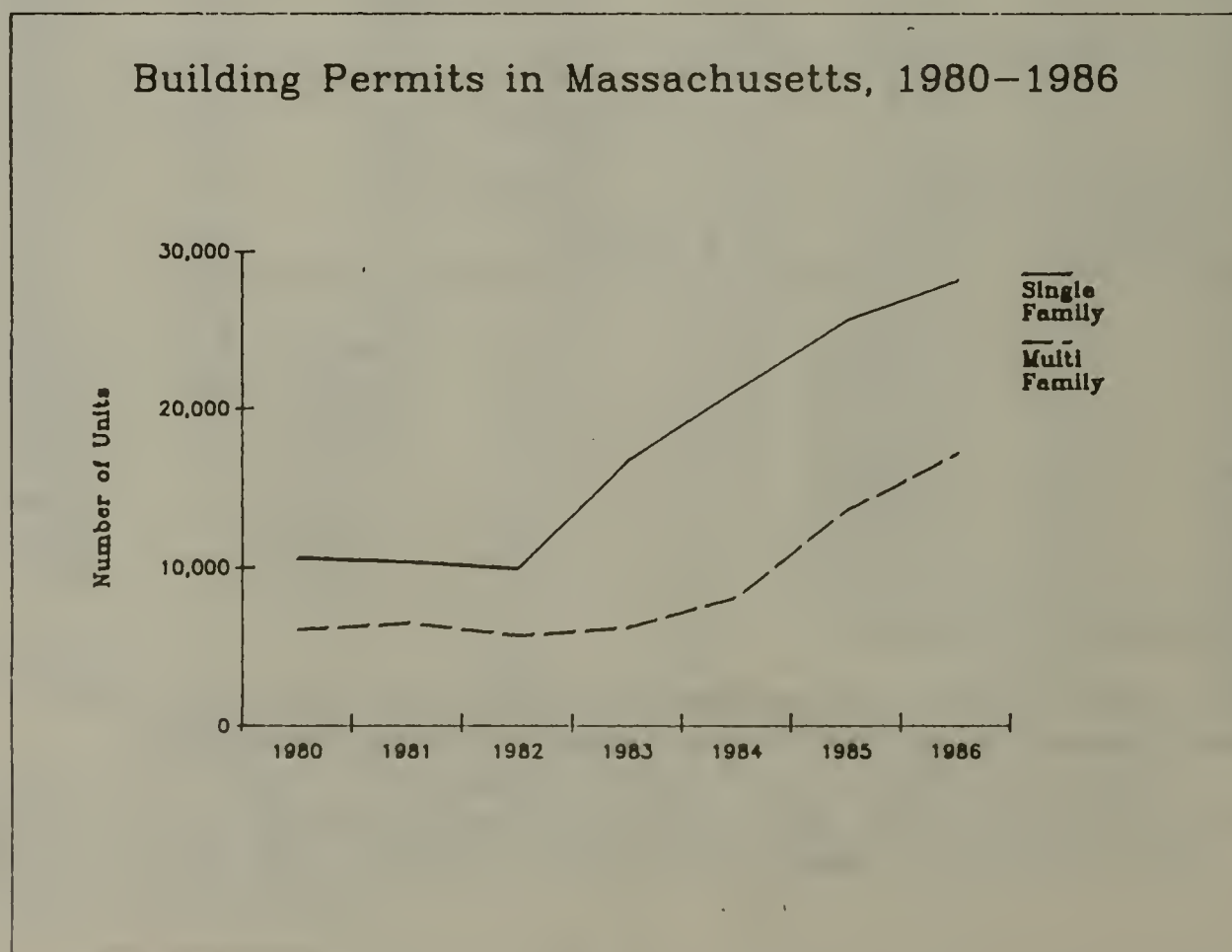


Table A-6

Median Sales Price of Existing Single-Family Homes for the
 Boston Metropolitan Area
 1982 - 1987 Annual and 1984-I to 1987-IV Quarterly
 Not Seasonally Adjusted
 (in thousands of dollars)

		% Change from Previous Year			
1982	\$	80.2			
1983		82.6		3.0%	
1984		100.0		21.1%	
1985		134.2		34.2%	
1986		159.2		18.6%	
1987		176.5 (est)		10.9%	
		I	II	III	IV
					Annual Average
1984		89.4	95.6	102.0	104.8
1985		108.6	131.0	138.8	144.8
1986		145.6	156.2	163.0	167.8
1987		170.0	175.8	181.6	178.6

Source: National Association of Realtors, Home Sales.

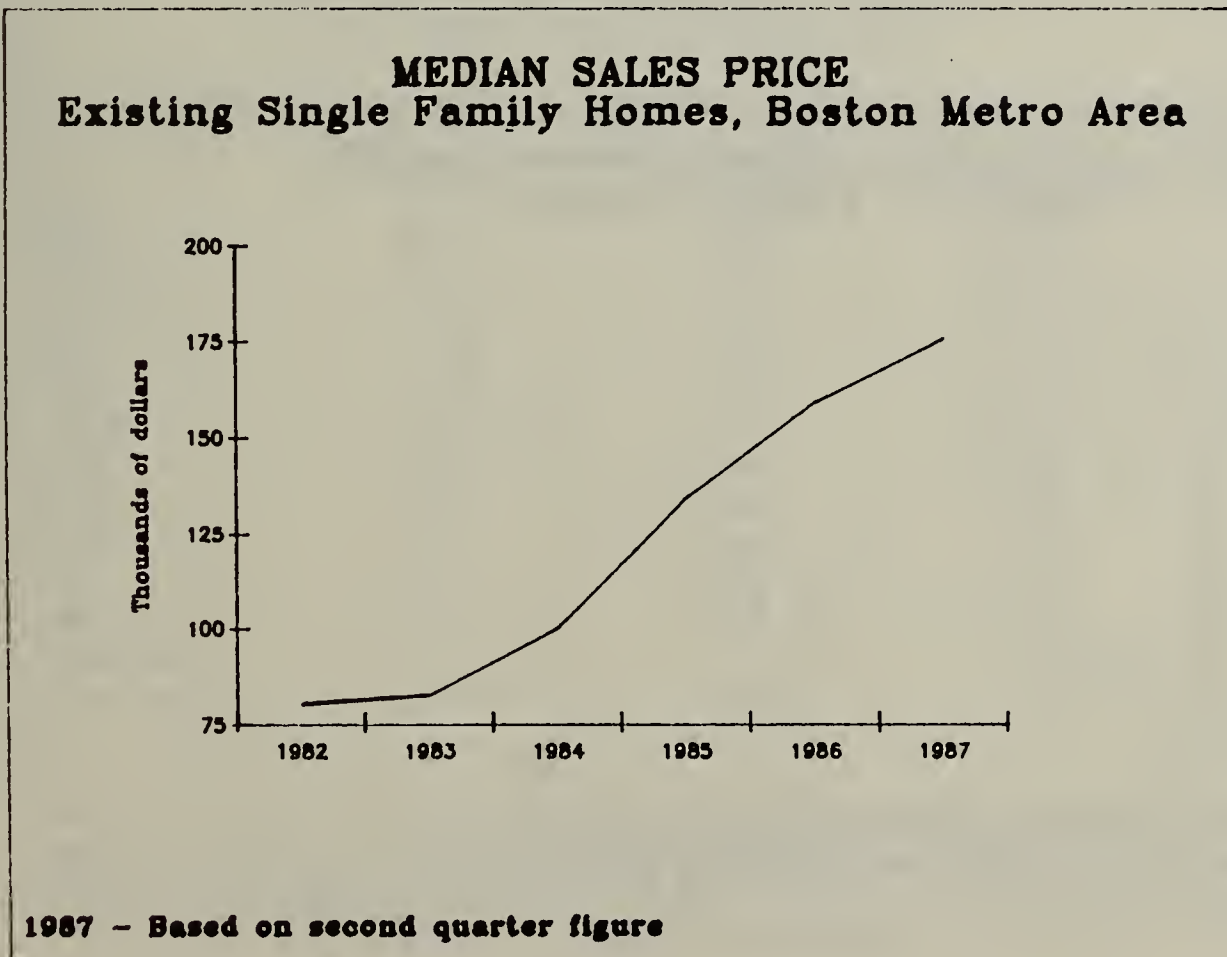


Table A-7

Total Existing Home Sales for Massachusetts,
Single-Family, Apartment Condos, and Co-ops
1982 - 1987 Annual and 1984-I to 1987-IV Quarterly,
Seasonally Adjusted Annual Rate
(in thousands of units)

		% Change from Previous Year			
1982	42.5				
1983	65.0	52.9%			
1984	66.5	2.3%			
1985	80.5	21.1%			
1986	84.6	5.1%			
1987	99.5 (est)	17.6%			
	I	II	III	IV	Annual Average
1984	61.3	70.1	64.9	69.3	66.5
1985	74.5	74.0	81.4	90.4	80.5
1986	80.2	86.1	92.4	94.0	84.6
1987	86.5	113.7	97.2	100.4	99.5

Source: National Association of Realtors, Home Sales.

**Total Existing Home Sales in Massachusetts
Quarterly, Annual Average**

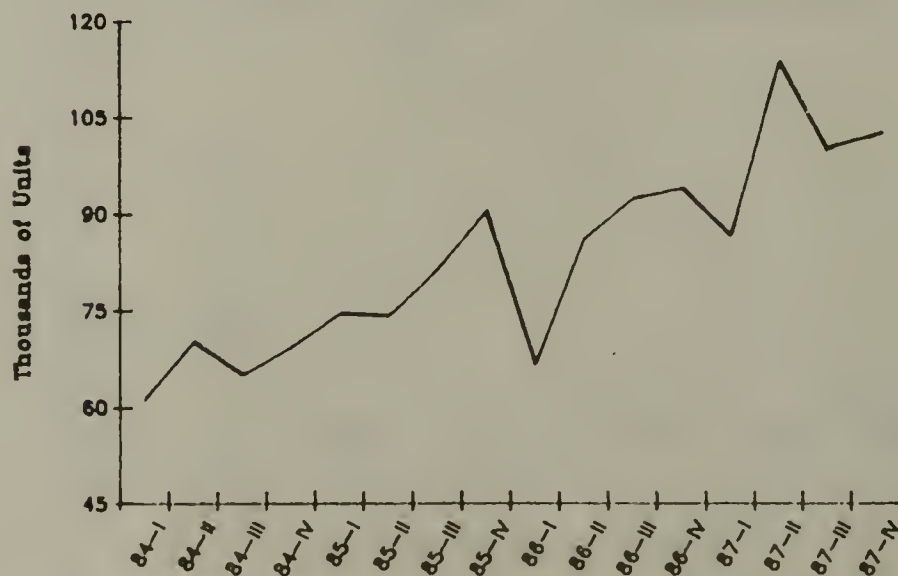


Table A-8

Interest Rates for Conventional Mortgages,
Existing Single-Family House Purchase
Boston Metro Area, Annual Averages

	Contract Rate	% Change from Previous Year	Effective Rate*	% Change from Previous Year
1980	13.04		13.44	
1981	15.69	20.3	16.07	19.6
1982	15.73	0.3	16.21	0.9
1983	12.86	-18.2	13.27	-18.1
1984	12.81	-0.4	13.14	-1.0
1985	11.65	-9.1	11.94	-9.1
1986	9.97	-14.4	10.21	-14.5
1987	9.00	-9.7	9.23	-9.6

*Effective rate includes points charged at closing, amortized over ten years.

Source: Federal Home Loan Bank Board, Mortgage Interest Rate Survey, Characteristics of Conventional Fully Amortized First Mortgage Loans Closed on Single-Family Homes during the First Five Working Days of the Month; Boston CMSA (includes New Hampshire portion).

Table A-9

Interest Rates for Conventional Mortgages,
Existing Single-Family House Purchase
Boston Metro Area, Monthly Rates

	1987 Contract Rate	1987 Effective Rate	1986 Contract Rate	1986 Effective Rate
JAN	8.90	9.18	10.30	10.54
FEB	9.01	9.22	10.40	10.62
MARCH	8.94	9.16	10.10	10.33
APRIL	8.92	9.17	10.27	10.49
MAY	9.22	9.44	9.96	10.19
JUNE	9.19	9.43	9.93	10.18
JULY	9.19	9.42	10.18	10.39
AUG	8.77	8.98	10.08	10.32
SEPT	8.71	8.96	9.96	10.22
OCT	8.77	8.96	9.71	9.98
NOV	8.92	9.16	9.31	9.56
DEC	9.30	9.51	9.39	9.65
Annual Average	9.00	9.23	9.97	10.21

Source: Federal Home Loan Bank Board, Mortgage Interest Rate Survey, Characteristics of Conventional Fully Amortized First Mortgage Loans Closed on Single-Family Homes during the First Five Working Days of the Month; Boston CMSA (includes New Hampshire portion).

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April 1989

Housing Stock and Employment Growth in Massachusetts

There is broad concern that the relatively high cost of homes in Massachusetts will constrain the state's economic growth. Home prices in the Boston area have more than doubled since 1983 (see Table A-6), and it is one of the highest priced areas in the nation. At the same time, the state has experienced declining unemployment (from a decade high of 7.9% in 1983 to 3.3% in 1988) and a high rate of labor force participation (in Massachusetts, 68.4% in 1988 compared with a U.S. civilian rate of 66.2%).

In order to have a growing work force for economic expansion, it is reasoned, an in-migration of workers will be necessary. However, Massachusetts' high housing costs discourages in-migration of job seekers from lower cost areas. With labor force growth thus constrained, employers may not open or expand businesses here. The principal evidence that housing costs may be having this effect is the difficulty some Massachusetts employers experience recruiting workers from out of state.

One of the causes of the steep rise in home prices in the 1980s was that demand for homes exceeded the supply. The state's prosperity contributed to the demand growth. Households were drawn to the state, and young people remained in the area on reaching maturity or after graduating from college, because jobs have been plentiful. These families and individuals swelled the number of households in the state. At the same time, incomes of households with working members increased: wages have been rising and, with the greater availability of jobs, more members are working. Households with higher incomes entered the housing market seeking first homes, and better homes.

These trends contributed to the tremendous demand for housing that culminated in a peak of 100,000 sales of owner-occupied units in 1987. (See Table A-7.) Housing developers responded to the growing demand, though not enough units were added to the stock to moderate price increases. (Price increases are due to factors besides excess demand, for example rising land cost). There was a net increase of about 134,000 year-round units between 1980 and 1986.

This article looks at the change in jobs and housing units in the recent past, to see what the relation between the two has been, and what this might suggest for housing policy. The first part examines the gross change in jobs, housing, and household population in the U.S. and Massachusetts, comparing the decade of the 1970s with the 1980s. The following sections look at change in the 1980s by region of the state. Data are presented on housing stock and employment growth for the period 1980 to 1986, and projected population growth for 1980 to 1995.

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Change in Jobs, Housing Units, and Household Population Since 1970

Comparing the change in jobs, housing units, and household population in Massachusetts with the U.S. brings to light a striking contrast between the decades of the Seventies and the Eighties. Data are presented in Table 1, below. In Massachusetts between 1970 and 1980, non-agricultural jobs and housing units (both year-round units and occupied units) increased at nearly the same rate: a growth of 18% in the former and 17-16% in the latter. The Nation's rates were similar to each other, though higher than those in Massachusetts: 28% growth in jobs and 28-27% in year-round and occupied housing units. However, Massachusetts' household population grew at only a fraction of the U.S. rate -- 1% for the state but 12% for the Nation. Thus, a sizable increase in the number of housing units in the state -- 17% more -- had a negligible impact on population growth.¹

Table 1. Change in Jobs, Housing Units, and Population in Households
(in thousands)

	MASSACHUSETTS							
	1970	1980	1986	Change 1970-80		Change 1980-86		
				Amount	Percent	Amount	Percent	
Non-agricultural wage and salary employment	2,243.5	2,652.2	2,980.7	408.7	18.2	328.5	12.4	
Year-round housing units	1,836.2	2,140.1	2,273.5	303.9	16.6	133.4	6.2	
Occupied housing units	1,759.7	2,032.7	2,158.7	273.0	15.5	126.0	6.2	
Population in households	5,482.4	5,537.4	5,615.6	55.0	1.0	78.2	1.4	
	UNITED STATES							
	1970	1980	1985	Change 1970-80		Change 1980-85		
				Amount	Percent	Amount	Percent	
Non-agricultural wage and salary employment	70,880	90,406	97,519	19,526	27.5	7,113	7.9	
Year-round housing units	67,699	86,693	96,749	18,994	28.1	10,056	11.6	
Occupied housing units	63,450	80,390	88,425	16,940	26.7	8,035	10.0	
Population in households	197,399	220,796	234,326	23,397	11.9	13,530	6.1	

Source: U.S. Dept. of Commerce, Bureau of the Census: Statistical Abstract of the United States; 1980 Census of Population and Housing; American Housing Survey, 1985, Current Housing Reports H-150-85; Abt Associates. 1985 U.S. household population estimated.

1/ Unfortunately, recent housing are available only for 1986 for Massachusetts and 1985 for the U.S. However, since we are interested in the direction of change rather than the absolute rates, and both 1985 and 1986 were comparable from the standpoint of the business cycle, they are comparable for our purposes.

The rates of job and housing stock growth diverge dramatically in the 1980s, with Massachusetts and the U.S. going in opposite directions. In Massachusetts, the rate of job growth was twice the rate of housing stock growth (occupied units or year-round units), while growth in the housing stock exceeded job growth nationally. Massachusetts gained 12% more jobs and 6% more housing units in the six years since 1980. In the U.S., during the first five years of the decade, jobs increased by 8% but year-round housing units increased by 12%.

Why was housing stock growth so much less than job growth in Massachusetts in this decade? One explanation is that many people who work in the state live in neighboring states, such as New Hampshire. Southern New Hampshire is part of the eastern Massachusetts metropolitan region centered in Boston. Nevertheless, the rather large difference in rates of growth in jobs and housing stock in Massachusetts, and the fact that many units must be added to permit even small population increases, suggest that only a much larger housing supply would yield a significant increase in population, and, coincidentally, labor force.

Regional Change 1980 - 1986: Housing Units

Between 1980 and 1986, the total number of housing units in the state, including seasonal units, grew by 142,000, or 6.4%. As shown in Table 2, all areas of the state added units, but the Cape Cod and Islands region had the highest rate of growth (21%). The Boston area added the largest number of housing units (57,000); nearly half of all the state's housing units are located in this region. (See Map 1 at end for areas.)

Table 2. All Housing Units, 1980 and 1986, by Planning Area

	1980	1986	Change 1980-1986		1986 Hsng Unit %
			Amount	Percent	Distribtn
Berkshire	59,245	62,423	3,178	5.4	2.7
Boston	1,100,776	1,158,161	57,385	5.2	49.3
Brockton	89,166	95,400	6,234	7.0	4.1
Cape Cod & Islands	113,549	137,713	24,164	21.3	5.9
Fitchburg/Leominster	75,292	80,572	5,280	7.0	3.4
Franklin	26,832	29,036	2,204	8.2	1.2
Lawrence/Haverhill	100,363	106,336	5,973	6.0	4.5
Lowell	78,485	85,885	7,400	9.4	3.7
Southeastern Region	187,376	198,287	10,911	5.8	8.4
Springfield	213,870	222,154	8,284	3.9	9.5
Worcester	163,192	174,457	11,265	6.9	7.4
Massachusetts	2,208,146	2,350,424	142,278	6.4	100.0

Source: Abt Associates, Mass. Housing Inventory and Policy Indicators, July 1988. 1980: April, 1980; 1986: Dec. 1986, approx.

Owner-occupied units increased at nearly twice the rate of all units, and renter-occupied units declined slightly (by less than 1%). These two trends are related because nearly 65,000 rental units were converted to condominiums, with the majority becoming owner-occupied. While the homeownership rate in the nation dropped between 1980 and 1987 (from 65.6% to 64.0%), the trend in Massachusetts was the reverse.² Between 1980 and 1986, the owner-occupied share of the stock increased from 57.5% to 60.3%. Tables 3 and 4 show the regional change in owner and renter-occupied units.

Table 3. Owner Occupied Units, 1980 and 1986, by Planning Area

	1980	1986	Change 1980 - 1986	
			Amount	Percent
Berkshire	34,087	36,405	2,318	6.8
Boston	557,287	621,179	63,892	11.5
Brockton	55,005	60,145	5,140	9.3
Cape Cod & Islands	47,988	59,451	11,463	23.9
Fitchburg/Leominster	42,543	46,120	3,577	8.4
Franklin	15,823	17,242	1,419	9.0
Lawrence/Haverhill	51,779	59,588	7,809	15.1
Lowell	48,941	57,244	8,303	17.0
Southeastern Region	102,676	111,195	8,519	8.3
Springfield	122,269	130,991	8,722	7.1
Worcester	91,421	101,080	9,659	10.6
Massachusetts	1,169,819	1,300,640	130,821	11.2

Source: Abt Associates, Mass. Housing Inventory and Policy Indicators, July 1988.

Table 4. Renter Occupied Units, 1980 and 1986, by Planning Area

	1980	1986	Change 1980 - 1986	
			Amount	Percent
Berkshire	18,313	18,592	279	1.5
Boston	482,809	474,339	(8,470)	-1.8
Brockton	27,196	27,719	523	1.9
Cape Cod & Islands	16,595	18,967	2,372	14.3
Fitchburg/Leominster	27,145	28,351	1,206	4.4
Franklin	8,405	8,944	539	6.4
Lawrence/Haverhill	40,745	38,667	(2,078)	-5.1
Lowell	26,042	24,918	(1,124)	-4.3
Southeastern Region	73,041	74,695	1,654	2.3
Springfield	80,011	79,287	(724)	-0.9
Worcester	62,596	63,598	1,002	1.6
Massachusetts	862,898	858,077	(4,821)	-0.6

Source: Abt Associates, Mass. Housing Inventory and Policy Indicators, July 1988.

2/ William Apgar and H. James Brown, The State of the Nation's Housing 1988, Joint Center for Housing Studies of Harvard University, 1988, p. 12.

Regional Change 1980 - 1986: Employment

All areas of the state added jobs between 1980 and 1986. Table 5 presents job growth by region. The Cape area had the largest growth rate, adding 37% more jobs over the six years. Jobs growth in the Lowell and Brockton areas grew at rates well above the statewide average (32% and 24%, respectively). The Fitchburg/Leominster and Springfield areas grew by the smallest rates (5%). The Boston area contained the majority of the state's jobs, as shown in the final column of Table 5. The Fall River/New Bedford area (Southeastern), and Springfield and Worcester areas, each had 7-8% of the state's jobs. All other areas contained 4% or fewer of the total.

Table 5. Employment, 1980 and 1986, by Planning Area
Annual Averages

	1980	1986	Change 1980-1986		1986 Employment
			Amount	Percent	% Distrib
Berkshire	50,839	55,113	4,274	8.4	1.9
Boston	1,506,631	1,689,796	183,165	12.2	58.6
Brockton	74,785	92,821	18,036	24.1	3.2
Cape Cod & Islands	57,376	78,386	21,010	36.6	2.7
Fitchburg/Leominster	72,512	76,100	3,588	4.9	2.6
Franklin	20,094	21,900	1,806	9.0	0.8
Lawrence/Haverhill	103,008	120,009	17,001	16.5	4.2
Lowell	75,473	99,607	24,134	32.0	3.5
Southeastern Region	187,510	208,101	20,591	11.0	7.2
Springfield	232,641	243,549	10,908	4.7	8.4
Worcester	183,573	199,913	16,340	8.9	6.9
Total	2,564,442	2,885,295	320,853	12.5	100.0
Massachusetts*	2,652,200	2,984,800	332,600	12.5	

* Mass. total includes estimate of jobs not covered by employment compensation laws.

Source: Mass. Division of Employment Security, Employment and Wages in Massachusetts' Cities and Town, 1980 - 1986 (ES-202 series), 1987; U.S. Bureau of Labor Statistics, Nonagricultural Wage and Salary Employment, by place of work (790 series).

Regional Job and Housing Stock Growth Compared

A comparison of the statewide rates of growth in housing stock and employment between 1980 and 1986 shows that housing stock increased at half the rate of jobs. Table 6 presents a regional comparison of 1980-86 growth rates for, and 1986 distribution of, housing stock and jobs. Four regions had job growth rates that far exceeded their rates of housing stock growth: Boston, Brockton, Lawrence/Haverhill, and Lowell. Other regions experienced rates of housing stock growth that were near or, in one case, above their job growth rates: Fitchburg/Leominster, Franklin County, Springfield, and Worcester.

Above-average job growth generally coincided with above-average housing stock growth. For example, Brockton, Cape Cod, and Lowell had the highest rates of job growth (24% or more); they also had above-average growth in housing stock (7% or more). On the other hand, Fitchburg/Leominster and Franklin had above-average increases in housing units, but below-average rates of job growth. In another pattern, Lawrence/Haverhill experienced above-average job growth and an average increase in its housing stock.

These data illuminate relationships between housing stock and employment growth, but if the 1980 stock distribution relative to jobs was "out of balance," then the disproportional growth rates of the 1980s could reflect "catching up." Were houses in 1986 located in areas in proportion to the distribution of jobs? There seems to be a rough proportional distribution of the two in most areas. The notable exceptions are Boston -- which has a greater share of jobs than homes (and is an importer of workers) -- and the Berkshire, Cape Cod, and Franklin areas, which have higher shares of housing units than jobs. The Berkshire and Cape Cod areas have many vacation homes, presumably not occupied by persons who work in the area.

Table 6. Housing Stock and Employment Growth and Distribution,
1980 - 1986, by Planning Area

	80-86 Growth Rate		Ratio of Hsng Stck/ Job Growth	1986 % Distribtn		Ratio of Hsng Stck/ Job Distrib
	Housing Stock	Jobs		Housing Stock	Jobs	
Berkshire	5.4	8.4	64.3	2.7	1.9	142.1
Boston	5.2	12.2	42.6	49.3	58.6	84.1
Brockton	7.0	24.1	29.0	4.1	3.2	128.1
Cape Cod & Islands	21.3	36.6	58.2	5.9	2.7	218.5
Fitchburg/Leominster	7.0	4.9	142.9	3.4	2.6	130.8
Franklin	8.2	9.0	91.1	1.2	.8	150.0
Lawrence/Haverhill	6.0	16.5	36.4	4.5	4.2	107.1
Lowell	9.4	32.0	29.4	3.7	3.5	105.7
Southeastern Region	5.8	11.0	52.7	8.4	7.2	116.7
Springfield	3.9	4.7	83.0	9.5	8.4	113.1
Worcester	6.9	8.9	77.5	7.4	6.9	107.2
Massachusetts	6.4	12.5	51.2	100.1	100.0	

Source: See Tables 2 and 5.

Population Projections, 1980 - 1995

Population projections for the state for the 1980s show modest growth, at 2.7%./3 Between 1980 and 1990, the prime working age population (20 to 55) grew at three times the rate of the population overall. As shown in

3/ Between 1970 and 1980, the state's population grew by about 5,000 people per year; between 1980 and 1990, it will grow by an estimated 15,000 persons per year.

in Table 7, the prime working age population is projected to grow by about 29,000 persons annually in the 1980s, but by only about 19,000 per year from 1990 to 1995. The Berkshire, Boston, and Springfield regions are projected to add these people at the lowest rates.

Table 7. Population of Prime Working Age, 20 to 55 years,
1980 Actual and 1990 and 1995 Projected, by Planning Area

	1980	1990	1995	% Change 80-90	% Change 90-95
Berkshire	63,915	66,832	66,848	4.6	0.0
Boston	1,409,601	1,521,448	1,534,030	7.9	0.8
Brockton	115,858	140,020	156,196	20.9	11.6
Cape Cod & Islands	66,419	88,347	102,220	33.0	15.7
Fitchburg/Leominster	93,521	106,472	111,621	13.8	4.8
Franklin	30,074	34,130	36,008	13.5	5.5
Lawrence/Haverhill	116,653	136,309	141,166	16.8	3.6
Lowell	110,411	129,046	133,458	16.9	3.4
Southeastern Region	228,166	260,284	280,215	14.1	7.7
Springfield	268,534	288,254	296,222	7.3	2.8
Worcester	197,455	220,162	227,503	11.5	3.3
Prime Working Age	2,700,607	2,991,304	3,085,437	10.8	3.1
Total Population	5,737,093	5,891,165	5,976,917	2.7	1.5
Working Age as a % of Total Population	47.1	50.8	51.6		

Source: MISER, Population Projections, 1990 and 1995, Cities and Towns in Massachusetts, March 1988; U.S. Bureau of the Census, 1980 Census of Population.

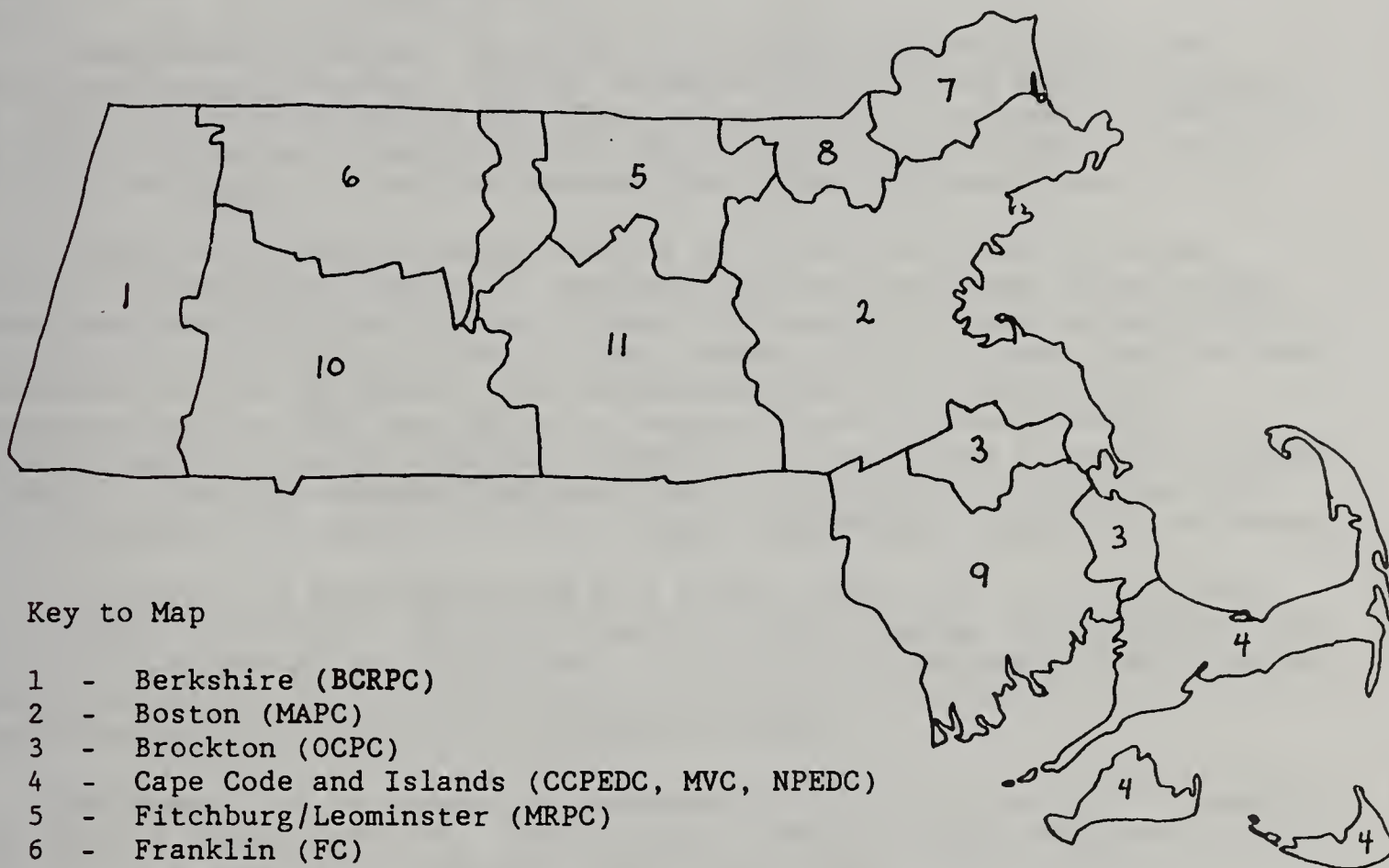
Conclusion

In the first six years of this decade, Massachusetts' economy expanded, and the state's housing stock, jobs, and population all increased. Jobs are projected to grow in the next decade, but population growth will slow. Since the rate of labor force participation is already very high, will there be enough workers to allow the potential economic growth to be realized?

Housing stock growth in the Eighties has lagged behind job growth. This pattern differs from that of the previous decade both in Massachusetts and the Nation. While estimates of the kind, characteristics, price, and location of housing that would be needed for the optimum labor force of the future are impossible to determine, it seems clear that a simple increase in housing supply will help. Public policies which encourage housing production, from direct subsidy to resolution of growth management issues, are indicated.

Sara E. Vermiel

Map 1. MASSACHUSETTS REGIONAL PLANNING AREAS



Key to Map

- 1 - Berkshire (BCRPC)
- 2 - Boston (MAPC)
- 3 - Brockton (OCPC)
- 4 - Cape Code and Islands (CCPEDC, MVC, NPEDC)
- 5 - Fitchburg/Leominster (MRPC)
- 6 - Franklin (FC)
- 7 - Lawrence/Haverhill (MVPC)
- 8 - Lowell (NMAC)
- 9 - Southeastern Region (SRPEDD)
- 10 - Springfield (PVPC)
- 11 - Worcester (CMRPC)

Part II

MASSACHUSETTS HOUSING UPDATE

Following is a discussion of recent trends pertaining to the housing situation in Massachusetts, and updates of the data series presented in the previous issue of the Housing Report.

Population projections released by the Massachusetts Institute for Social and Economic Research (MISER) in March 1988 forecast a 2.7% increase in the state's population during the 1980s, from 5,737,093 in 1980 to 5,891,165 in 1990. This annual growth rate of 0.3% is expected to continue through 1995. At this pace, 17,000 new residents would be added each year.

Population in the household-forming and first-time homebuying age groups is projected to decline in the first half of the 1990s, after having grown considerably in the current decade. The number of persons aged 20-34 will drop to 1.4 million persons in 1995, which is 128,145 less than the 1980 population in this age group. The population aged 25-39--first-time homebuyers and families trading up or changing homes as their family composition and financial situation changes -- is projected to hold steady at about 1.5 million between 1990 and 1995. (Table A-1.) Projections for these age groups for 1990 and 1995 are lower than MISER's June 1986 estimates.

The number of **households** grew at a faster rate than did population in the 1980-1986 period. Boston gained the largest number of households, but the Cape area grew at the fastest rate. (Table A-2.) Household growth ranged from a low of 4% in the Springfield area to a high of 21% on Cape Cod (including Martha's Vineyard and Nantucket Island).

Employment in Massachusetts increased 1.9% in 1988 over 1987, compared with the U.S. growth of 3.6%. Unemployment in Massachusetts continued to be low--at 6.7% or less of the national rate during 1988. (Table A-4.)

Building permits were down in 1988 compared to 1987. The number of units for which construction permits were taken out dropped by about a third overall. Single-family construction permits granted between 1980 and 1988 were about twice the number of multi-family permits. (Table A-5.)

The 1988 annual median **home price** in the Boston area for existing single-family homes was \$181,200, up 2% over 1987. (Table A-6.)

The 1988 volume of home **sales transactions** in Massachusetts, at an estimated annual rate of 88,500 units (single-family homes, condos, and co-ops) was 12% below the 1987 level. This rate still is 5% higher than the 1986 annual rate. The 100,000+ transactions in 1987 was an unprecedented volume.

Interest rates at closing for conventional mortgages in the greater Boston area, for the purchase of existing single-family homes, were slightly lower in 1988 compared in 1987. Table A-8 presents contract rates, which include adjustable as well as fixed rate mortgages. Recently, the rates offered by banks in New England have been trending up, meaning that the average rate at closing should be higher in the future. (Table A-9.)

Table A-1

Massachusetts Population of Household-Forming Age (20-34 years)
and First-Time Homebuying Age (25-39 years)
1980 Actual, 1985 - 19950 Projections

Household-Forming Population, Aged 20 - 34 Years				
Change from Preceding Period				
	Population	Number	Percent	
1980	1,488,500			
1990	1,537,070	48,570	3.3	
1995	1,360,355	(176,715)	-11.5	

First-Time Homebuying Population, Aged 25 - 39 Years				
Change from Preceding Period				
	Population	Number	Percent	
1980	1,284,100			
1990	1,541,826	257,726	20.1	
1995	1,532,573	(9,253)	-0.6	

Note: Figures rounded to nearest 100.

Source: 1980: U.S. Dept. of Commerce, Bureau of the Census.

1990-1995: Mass. Institute for Social and Economic Research,
March 1988.

Table A-2

Change in Number of Households by Regional Planning Area
1980 Actual and 1986 Estimated

Region	1980	1986	Change 1980 - 1986	
			Amount	Percent
Berkshire	52,400	54,997	2,597	5.0
Boston	1,040,096	1,095,329	55,233	5.3
Brockton	82,201	87,866	5,665	6.9
Cape Cod & Islands	64,583	78,421	13,838	21.4
Fitchbury/Leominster	69,688	74,469	4,781	6.9
Franklin	24,228	26,192	1,964	8.1
Lawrence/Haverhill	92,524	98,249	5,725	6.2
Lowell	74,983	82,163	7,180	9.6
Southeastern Reg.	175,717	185,891	10,174	5.8
Springfield	203,194	210,214	7,020	3.5
Worcester	154,017	164,680	10,663	6.9
Total	2,033,631	2,158,471	124,840	6.1
Total Population	5,737,093	5,832,000	94,907	1.7

Source: Abt Associates, Mass. Housing Inventory and Policy
Indicators, 1980 Decennial Census and Abt estimates; U.S Bureau
of the Census, "July, 1986, Population...Estimates for States..."

Table A-3

Massachusetts and U.S. Non-Agricultural Wage and Salary Employment
1980 - 1988, Annual Averages
(in thousands)

	Massachusetts		United States	
	Amount	Percent Change	Amount	Percent Change
1980	2,652.2		90,406	
1981	2,668.3	0.6	91,156	0.8
1982	2,638.0	-1.1	89,566	-1.7
1983	2,692.5	2.1	90,200	0.7
1984	2,851.8	5.9	94,496	4.8
1985	2,926.0	2.6	97,519	3.2
1986	2,984.8	2.0	99,610	2.1
1987	3,061.8	2.6	102,310	2.7
1988	3,119.6	1.9	106,039	3.6
Net Change 80-88	467.4	17.6	15,633	17.3

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Current Employment Series, and Mass. Division of Employment Security, Employment Review (87 & 88 figures based on March 1988 benchmark).

Table A-4

Unemployment Rates, Massachusetts, United States, and
Boston Metro Area, 1987 and 1988

	Massachusetts		United States*		Ratio MA/US Rate, 1988	Boston Metro	
	1988	1987	1988	1987		1988	1987
Jan	3.8	4.1	6.3	7.3	0.60	3.1	3.3
Feb	3.8	3.9	6.2	7.2	0.61	3.1	3.1
Mar	3.6	4.5	5.9	6.9	0.61	3.0	3.6
Apr	2.9	3.9	5.3	6.2	0.55	2.5	3.3
May	2.7	3.4	5.4	6.1	0.50	2.3	2.9
June	3.4	3.1	5.5	6.3	0.62	3.0	2.7
July	3.6	2.6	5.4	6.1	0.67	3.1	2.2
Aug	3.1	2.8	5.4	5.8	0.57	2.7	2.5
Sept	3.0	2.8	5.2	5.7	0.58	2.7	2.5
Oct	2.8	2.7	5.0	5.7	0.56	2.5	2.3
Nov	3.5	2.3	5.2	5.6	0.67	3.0	2.0
Dec	3.0	2.6	5.0	5.4	0.60	2.5	2.3
Annual Avg.	3.3	3.2	5.4	6.2	0.61	2.8	2.7

Not seasonally adjusted.

*Civilian unemployment rate.

Source: Mass. Division of Employment Security, Monthly Labor Force and Unemployment Data, for the U.S. Bureau of Labor Statistics.

Table A-5

Building Permits in Massachusetts, 1980-1988 Annual Averages

Single-Family Housing Units

	<u>Construction</u>	<u>Demolition</u>	<u>Net</u>	<u>Percent Net Year to Year Increase</u>
1980	10,520	459	10,061	
1981	10,273	505	9,768	(2.9)
1982	9,855	378	9,477	(3.0)
1983	16,692	404	16,288	71.9
1984	21,184	426	20,758	27.4
1985	25,594	503	25,091	20.9
1986	28,110	646	27,464	9.5
1987	25,311	845	24,466	(10.9)
1988	17,072	663	16,409	(32.9)
Total 1980-88	164,611	4,829	159,782	

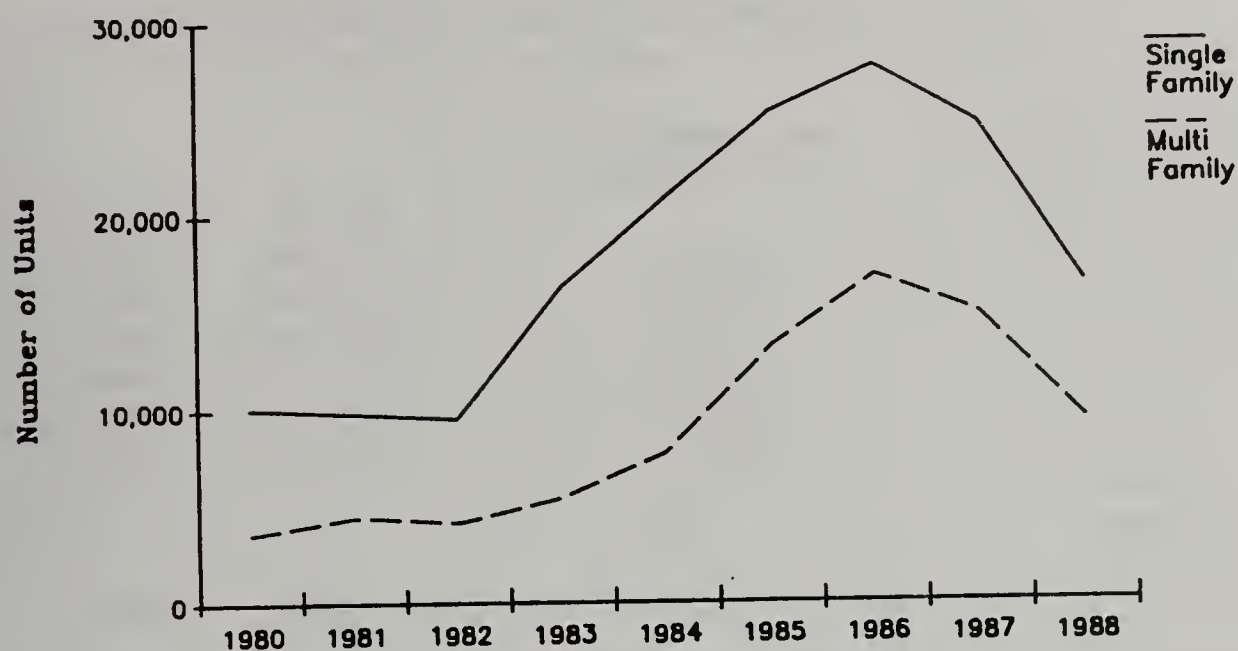
Multi-Family Housing UnitsPercent Net Year
to Year Increase

	<u>Construction</u>	<u>Demolition</u>	<u>Net</u>	<u>Percent Net Year to Year Increase</u>
1980	5,972	2,416	3,556	25.1
1981	6,409	1,959	4,450	(7.2)
1982	5,584	1,453	4,131	31.4
1983	6,148	720	5,428	41.5
1984	8,104	422	7,682	70.8
1985	13,602	480	13,122	27.9
1986	17,105	325	16,780	(12.1)
1987	15,108	358	14,750	(36.6)
1988	9,795	446	9,349	
Total 1980-88	87,827	8,579	79,248	

Note: For private construction only; estimates with imputation.

Source: U.S. Dept of Commerce, Bureau of the Census, Construction Statistics Division, "State/County Permit Authorized Construction in Permit Issuing Places," annual 1980-1987, December 1988 year to date.

Building Permits in Massachusetts, 1980-1988



MEDIAN SALES PRICE AND UNITS SOLD

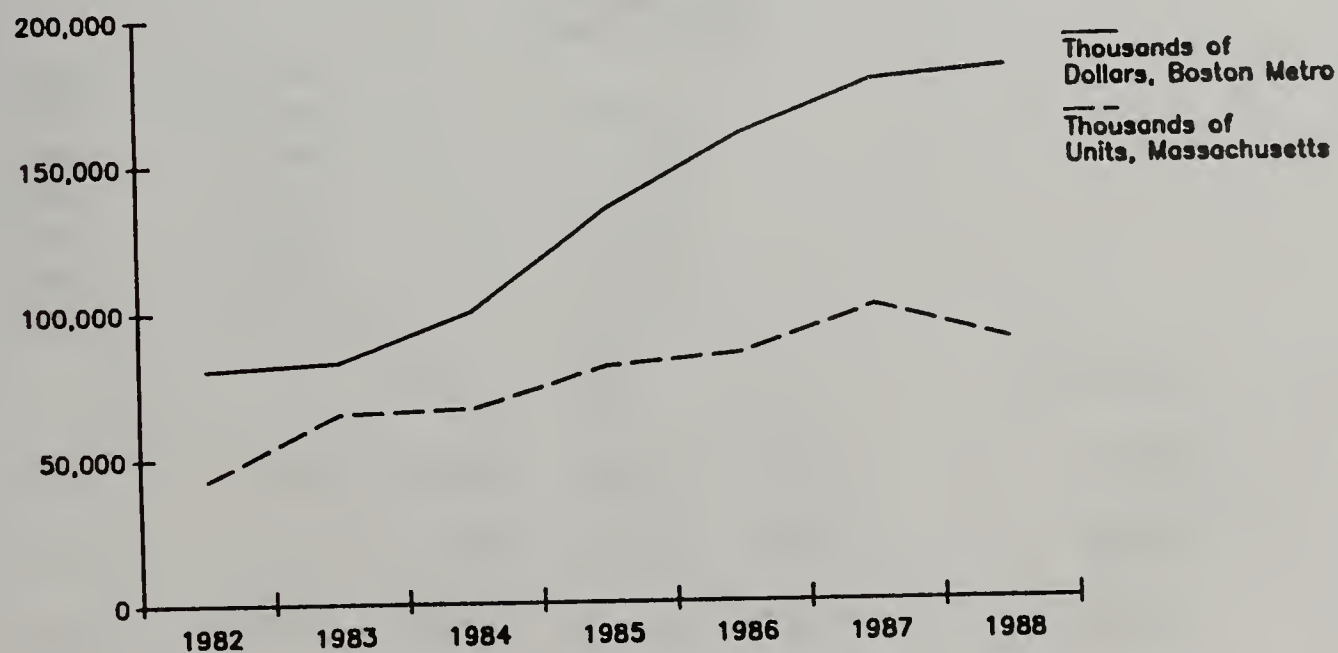


Table A-6

Median Sales Price of Existing Single-Family Homes for the
 Boston Metropolitan Area
 1982 - 1988 Annual and 1984-I to 1988-IV Quarterly
 Not Seasonally Adjusted

		% Change from Previous Year			
1982	\$ 80,200				
1983	82,600			3.0%	
1984	100,000			21.1%	
1985	134,200			34.2%	
1986	159,200			18.6%	
1987	177,200			11.3%	
1988	181,200 p			2.3%	
	I	II	III	IV	Annual Average
1984	89,400	95,600	102,000	104,800	\$ 100,000
1985	108,600	131,000	138,800	144,800	134,200
1986	145,600	156,200	163,000	167,800	159,200
1987	170,000	176,200	182,200	177,500	177,200
1988	176,900	182,900	183,800	182,800	181,200

Table A-7

Total Existing Home Sales for Massachusetts, Single-Family Homes,
 Condos, and Co-ops, 1982 - 1988 Annual and 1984-I to 1988-IV Quarterly
 Seasonally Adjusted Annual Rate

		% Change from Previous Year			
1982	42,500				
1983	65,000			52.9%	
1984	66,500			2.3%	
1985	80,500			21.1%	
1986	84,600			5.1%	
1987	100,500			18.8%	
1988	88,500 p			-11.9%	
	I	II	III	IV	Annual Average
1984	61,300	70,100	64,900	69,300	66,500
1985	74,500	74,000	81,400	90,400	80,500
1986	80,200	86,100	92,400	90,900	84,600
1987	90,300	109,200	99,100	97,200	100,500
1988	96,000	96,600	85,900	74,500	88,500

Source: National Association of Realtors, Home Sales.

Table A-8

Interest Rate for Conventional Mortgages,
Existing Single-Family House Purchase
Boston Metro Area, Annual Averages*
(Rates at Closing)

	Contract Rate	% Change from Previous Year	Effective Rate**	% Change from Previous Year
1980	13.04		13.44	
1981	15.69	20.3	16.07	19.6
1982	15.73	0.3	16.21	0.9
1983	12.86	-18.2	13.27	-18.1
1984	12.81	-0.4	13.14	-1.0
1985	11.65	-9.1	11.94	-9.1
1986	9.97	-14.4	10.21	-14.5
1987	9.00	-9.7	9.23	-9.6
p1988	8.98	-0.2	9.20	-0.3

*Includes fixed and adjustable rate mortgages, and MHFA mortgages.

**Effective rate includes points charged at closing, amortized over ten years.

Source: Federal Home Loan Bank Board, Mortgage Interest Rate Survey, Characteristics of Conventional Fully Amortized First Mortgage Loans Closed on Single-Family Homes during the First Five Working Days of the Month; Boston CMSA (includes New Hampshire portion).

Table A-9

Median Mortgage Commitment Rates in New England
Fixed Rates, 1988 and 1989, Monthly
(Data as of the 15th of Each Month)

	1989 Fixed Rate	1988 Fixed Rate	% Change from Year Ago
Jan	10.75	10.50	2.38
Feb		9.95	
March		9.95	
April		10.25	
May		10.50	
June		10.50	
July		10.50	
Aug		10.75	
Sept		10.50	
Oct		10.25	
Nov		10.25	
Dec		10.75	

Source: Federal Home Loan Bank Board, ARM Data Sheet, Jan. 25, 1989.

